

UNPUBLISHED PRELIMINARY DATA

Maxwell Graduate School of Citizenship and Public Affairs

Syracuse University

NASA Contract No. NASr 206

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Work at the Maxwell School under the NASA Contract has continued in the two directions mentioned in the previous report, that is:

- (a) ICP Case Studies in the area of science and government;
- (b) research in science and government problems with the dual purposes of directly contributing to analysis of problems and, indirectly, strengthening faculty background for teaching of graduate seminars in or related to this field.

A. CASE STUDIES PROJECT

The objective of the case study portion on this grant is the preparation by the Inter-University Case Program of six case studies concerning the formulation and/or execution of national science policies or programs. The methodology to be employed is the preparation of case studies based on files, other written materials, and interviews with the principal actors. Work on the case studies commissioned and in progress are as follows:

1. Roger A. Kvam: Communications Satellite Bill of 1962.

Professor Kvam has completed the first revised draft of his case study and turned it over to the ICP central office for editing and review. The draft, in accordance with regular ICP practice, will be edited, mimeographed, and circulated to the principal characters described in it with circulation also to the ICP trustees and to a committee made of specialists advising the ICP on the preparation of science and government cases.

2. Richard Chapman: The Decision to Go Operational with the TIROS Weather Satellite. After considering Professor Chapman's outline and the substance of the December conference described in our previous quarterly report, the deputy director of meteorological programs of OSSA, NASA, announced NASA's decision to defer the special NASA study that had been discussed with Mr. Chapman and Professor Bock. Mr. Chapman continued his research during the quarter, in the course of which he visited and interviewed officials of the National Weather Satellite Center and other officials of the Weather Bureau and the Department of Commerce, officials of the Defense Department, officials in the Offices of Space Science and Applications, and former officials of agencies connected with the TIROS operation who have since retired from government service. In addition, he continued to work with large volumes of the documentation available on this project. Professor Bock and Professor Chapman conferred on the improvement of Professor Chapman's working outline and on modifications suggested by data gathered during Mr. Chapman's research in recent months.

3. Michael Reagan: Relationships between NASA, California Tech, and Jet Propulsion Laboratory on the Ranger Project. Professor Reagan visited Washington in January 1965 to confer with officials of the Office of Space Science and Applications about the feasibility of his study and the possibility of securing access. These discussions led Professor Reagan to modify some of his original research conceptions. He will submit a revised prospectus to NASA for consideration in the coming quarter. If NASA will not furnish access or cooperation for this study, Professor Reagan will prepare a study of the contractual relationships in the MOHOLE project.

Professor Bock has conferred with various NASA officials about the value and research feasibility of possible subjects for the remaining three case studies. One possibility raised by the ICP was for a capture and record study of aspects of the operation of NASA's Legislative Liaison team. After internal agency consideration this project was abandoned. The ICP has arranged to employ as a member of its full-time Syracuse staff starting in September 1965 Mr. William Henry Lambright, a NASA Fellow and Ph.D. candidate of Political Science at Columbia University. Mr. Lambright will prepare two case studies in the government-science field during the academic year 1965-1966. The subjects of the case studies to be prepared by Mr. Lambright will be selected from among the following topics, which are being discussed with NASA officials in connection with securing agency access and cooperation: (a) the Administrator's policy decision on whether to concentrate university contracts on "strong" institutions or to distribute them more widely; (b) a history of the relationships between the Huntsville Center and NASA headquarters from the time of transfer until 1964, (c) the decision to build the Michoud installation rather than contract out; (d) a case study of efforts at developing long-range technical program planning processes--emphasizing the relationship between planners and actual program administrators. If NASA is unable to make available the necessary access and cooperation, the remaining three cases will deal with subjects outside of NASA. Those now being considered include: (a) the unsuccessful effort to secure a particle accelerator for Midwest universities; (b) the location of the PHS Environmental Health Center; (c) science policy relationships among the Food and Drug Administration, the Secretary of the

Department of Health, Education and Welfare, and the Congress;
(d) the effort of the National Academy of Science to improve the quality of scientific advice to congressional committees dealing with science policy matters.

B. RESEARCH ON SCIENCE AND GOVERNMENT PROBLEMS- Professor Linton Freeman.

Professor Freeman is working on a theoretical analysis of some of the problems inherent in screening proposals for scientific research. Most screening is presently based upon arbitrary criteria and procedures which neglect the long-range implications that alternate procedures and criteria may produce. In order to develop a theory of screening, basic input variables (such as the proportions of proposals of various quality levels) have been defined, which under different screening conditions will produce funded projects with proportions of various qualities. In addition, simulation runs of alternative theoretical systems have been made so that their numerical results can be compared with available data on funding procedures and results.

Currently, Professor Freeman is involved in working out some modifications of McPhee's Survival Theory in order to make it applicable to screening problems. Various other theoretical schemes (e.g., Kolmogoroff's Theory of Breakage and Koopman's Theory of Search) are being reviewed for their possible applicability. The final report will include a formal statement of the theory supported by a description of its fit to existing data and a set of suggestions for effective strategy.

C. RESEARCH ON TECHNICAL, SCIENTIFIC AND ADMINISTRATIVE INNOVATION
WITHIN ORGANIZATIONS- Professor Victor A. Thompson

The project of investigating the problems associated with improving the scientific, technical and administrative innovative capacity of modern organization will be begun this summer and continued in the fall. The focus of the project is centered chiefly in governmental organizations although other sources of data will be used. Specifically, the project will attempt to discover a method of assessing the innovative record of an organization and the effect that resource allocation and organizational success or failure have on innovative activities. In regard to individual innovation, the project will define and explore those conditions and incentives that stimulate such innovation as well as the manner in which organizations provide a conducive atmosphere that motivates innovative behavior. In addition the role of organizational structure and types will be studied and correlated to the other material.

The method used in the project will involve a survey of the literature in the field supplemented by interviewing or inquiry where needed. It is expected that the results of the project will contain important information on adaption and innovation in both existing and new organizations. The end result will be a modest-sized book and a series of articles.